

C l a i m s :

1. Method for producing a tubular workpiece, especially a shock-absorber piston rod, wherein, starting out from a tubular initial workpiece (3), a first area (3a) of the initial workpiece (3) is reduced in a first step by a radial forming process for reducing its outer diameter, and a transition area (3c), extending at an angle relative to the longitudinal axis (A) of the tubular initial workpiece (3), is formed, said transition area (3c) extending between said first area (3a) of the initial workpiece (3) having the reduced diameter and a non-reduced second area (3b) following the transition area (3c), characterized in that in a second process step, following the first process step, the transition area (3c) of the initial workpiece (3) is cold-formed to obtain the substantially rectangular shoulder (2) of the workpiece (1).

The method as defined in Claim 1, characterized in that radial forming of the first area (3a) is effected by rotary swaging.

2. The method as defined in Claim 1, characterized in that the forming process of the second process step is an orbital forging or axial pressing process.
3. The method as defined in Claim 3, characterized in that the orbital forging process is effected by at least one of circular movement and a tilting movement.
4. Workpiece with a substantially rectangular shoulder (2), characterized in that the shoulder (2) is an integral part of the wall of the initial workpiece (3) and that the shoulder (2) is produced by cold forming the initial workpiece (3) by a radial forming process, followed by an orbital forging or axial pressing process.

5. Device for producing a tubular workpiece with a substantially rectangular shoulder (2), characterized in that the device (10) comprises a reducing unit (11), by means of which a transition area (3c) in the form of a circumferential inclined surface can be formed in a tubular initial workpiece (3), and a forming unit (15) by means of which the inclined transition area (3c) can be converted to a substantially rectangular shoulder (2) of the workpiece (1) by cold forming of the initial workpiece (3).
6. The device as defined in Claim 6, characterized in that the reducing unit (11) of the device (10) comprises at least one forging die (12).
7. The device as defined in Claim 7, characterized in that at least one forging die comprises an inclined forming surface (13).
8. The device as defined in Claim 6, characterized in that the forming unit (15) of the device (10) is designed as orbital forming unit.
9. The device as defined in Claim 6, characterized in that the forming unit (15) comprises an orbital tool (16) that performs an orbital movement about a longitudinal axis (A) of the initial workpiece (3).